GLADSTEIN & ASSOCIATES, LLC

Building an Environmentally &
Socially Responsible Future

Clifford Gladstein, *President*
Cindy "Sid" Greenwald, *Vice President*
Erik Neandross, *Vice President*

June 9, 2003

Susan Brown
California Energy Commission
1516 9th Street, MS 41
Sacramento, CA 95814

RE: AB 2076 Hearing Testimony Follow Up

Dear Ms. Brown:

To provide some additional background materials for staff's inclusion in the AB 2076 draft report, I am now providing some additional background to my testimony provided last Friday. Below is some more specific information that may prove useful to staff in evaluating the total potential for LNG production from California's unconventional gas sources such as landfills and stranded wells.

Currently, there are three active projects working to develop LNG from landfill gas. In addition to these three projects, there is an estimated eight to 10 additional landfills that could be easily outfitted to also produce LNG as demand for the fuel increases.

	No. of Projects Under Development	**Total Target LNG Gallons Produced Per Day**	**TOTAL Potential LNG Production**
Waste Management	2	10,000	20,000
Applied LNG Tech.	1	30,000	30,000
Other Potential	10	10,000	100,000
			150,000

In addition to these active and potential projects, a leading manufacturer of LNG production technology, using U.S. EPA data, estimates that the total in-state potential for producing LNG from landfill gas is 784,000 gallons per day. Beyond the State of California, it is estimated that 1.5 million gallons of LNG can be produced from landfills throughout the western United States, and nearly 6.8 million gallons per day can be produced nationally. A summary of this data is attached to this correspondence.

Besides landfill gas projects, industry estimates show that there is a potential to produce 30,000 gallons per day of LNG from stranded wells located north of the Sacramento

region, and an additional 70,000 gallons of LNG can be produced per day from stranded wells located west of Stockton, California.

Lastly, as promised, below is a summary of the 10 projects now being developed throughout California to produce LNG using in-state gas sources.

	Project Developer	LNG GPD Potential	Gas Source
1	Waste Management (x2)	20,000	landfill
2	Applied LNG Technologies	30,000	landfill
3	Applied LNG Technologies	20,000	stranded well
4	Cryogenic Equipment & Systems	12,000	stranded well
5	Cryogenic Equipment & Systems/SoCal Gas Co.	13,000	pipeline
6	SunLline Transit Agency/Clean ENRG	50,000	pipeline
7	Praxair	40,000	pipeline
8	Pacific Gas & Electric/INEEL	20,000	pipeline
9	Harris Ranch/INEEL	20,000	pipeline
10	Mitsubishi	150,000	terminal
		375,000	

I believe that this information will provide staff with an updated "snapshot" of the LNG production efforts now underway within the State. A lot has developed since the Energy Commission's 2001 report on LNG supply and demand within the State's transportation sector. With the increased in-state production of LNG, especially from low-cost gas sources such as landfills and stranded wells, we believe that the supply of LNG will surpass demand, competition within the market place will increase, and ultimately, prices for LNG will be reduced. The inclusion of this additional information within the staff's draft report will undoubtedly further strengthen the cost-effectiveness of the option for the increased use of LNG within the State's medium- and heavy-duty transportation sector.

I hope that you and your staff find this additional data helpful. If you have any questions regarding this information, please do not hesitate to contact me.

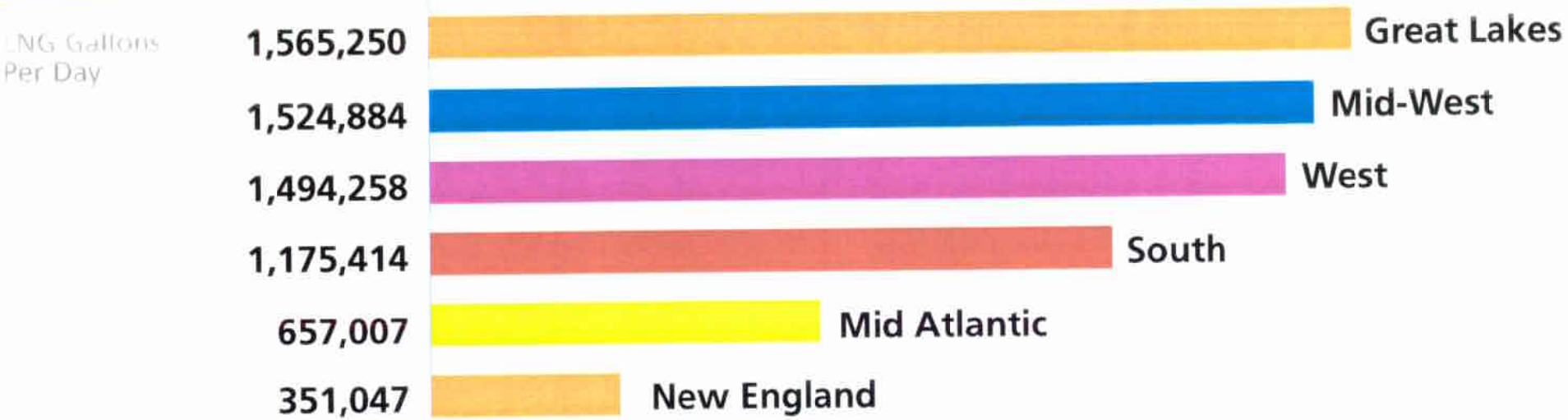
Sincerely,

Erik Neandross

Cc: Chairman Alan C. Lloyd, California Air Resources Board
Commissioner James D. Boyd, California Energy Commission
Commissioner John L. Geesman, California Energy Commission

LNG Potential from EPA Candidate Landfill Projects

United States



Five Western States

CRYOFUEL SYSTEMS
T 360.794.3755
F 360.794.4636
www.cryofuelsystems.com